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ABSTRACT

The Instructional Support System for Occupational Education (ISSOE) project focused on (1) review of individualized education systems, (2) selection of appropriate occupational clusters, and (3) development and field testing of a system and materials. Exemplary and innovative approaches to individualized education were reviewed by site visits and a literature review which produced a project brochure, a teacher's guide to decision making, and a teacher manual clarifying major issues. Selection of the occupational clusters, Business/Office Occupations and Automotive Mechanics, was based on existence of well-developed ISSOE curricula and related work in these skill areas by another ISSOE project (CE 023 531). Steps in an individualized education system are notice of planning, student program planning, and development of an individual program plan (IPP)/individual education plan (IEP). The Individual Program Planning Information (IPPI) form and Teacher Planning Worksheet developed were tested by students and teachers. Business educators evaluated the teacher's guide and other ISSOE materials. Publications and meetings disseminated project activities. Recommendations for ISSOE implementation are dissemination/implementation, field testing, and evaluation of the materials developed; implementation workshops for teachers; and compilation and dissemination to teachers of lists of instructional support materials compatible with ISSOE. (Appendixes include a leaflet on individualizing education and the IPPI form.) (YLB)

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ISSOE

Student Guidance and Development of Personalized Occupational Education Programs

Final Report

Findings and Recommendations

October 1979

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Preface

This project was initiated by Dr. Vernon Beuke. Vern worked at the Cornell Institute for Occupational Education for several years and spent his last nine months at the Institute directing this project. He left the Institute to take a position with Abt Associates in Cambridge, Massachusetts to direct the federally mandated study on state compliance with the Vocational Education requirements.

Dr. Robert Frank replaced Vern as Project Director and completed the final aspects of this study. Together, both of these individuals prepared the final report.

They were assisted throughout their research by numerous members of the C.I.O.E. research and support staffs. Karen Mitchell, a Research Associate to the Institute, was especially helpful in conducting extensive literature reviews on Individualized Education. Steve Farrar, a second Research Associate to the study, provided both intellectual and technical assistance to the research.

This final report marks the beginning of an important stage of occupational education research; it provides the foundations for the individualization of competency-based occupational education within the State of New York.

James A. Dunn
Institute Director
and Professor of Education
October 31, 1979

Introduction

This report reviews the activities of the ISSOE Student Guidance and Personalized Occupational Education Programs project. The major findings of the projects are summarized and possible dissemination and implementation activities are recommended to the State Education Department in order to assure the continued acceptance and support of ISSOE products by occupational educators in the State of New York.

Project Activities

The activities of this project have focused on four broad research areas. These are:

- Reviewing major individualization systems and relevant classroom management strategies.
- Selecting appropriate occupational clusters to use for initial efforts in developing a system for individualizing occupational programs.
- Developing a system and requisite materials to support teacher efforts to individualize occupational programs.
- Field testing the system and revising the methods and materials to maximize local options and accommodate local needs.

The CIOE research staff sought fully to articulate these with other ISSOE research and development activities sponsored by the State Education Department. Institute collaboration with other projects include presentations by staff at regional ISSOE meetings in nine regions, at the Regional Coordinator's workshop in July 1979, and personal contacts with many regional coordinators, area facilitators, and State Education Department persons through visits, mail correspondence and phone conversations. These activities began when the project proposal was being drafted and continued throughout the year.

The two ISSOE projects funded at CIOE have also enjoyed close articulation and collaboration. This has occured through periodic meetings among the Institute Director and the two project directors. Faculty of the Department of Education have attended and assisted in study design, implementation and evaluation. Copies of minutes of these meetings are appended to this report (See Appendix C).

Review Individualized Education Systems

The review of exemplary and innovative approaches to individualization of education proceeded by observing actual individualized vocational education programs operating in New York State, through a formal review of the literature and through interviews with specialists in the field.*

Site Visits

Project staff interviewed SED associates in Occupational Guidance and Education of the Handicapped Programs in Albany. These interviews took place in December 1978. Major topics included:

1. An orientation to the activities and concerns of each Bureau.
2. Policy statements, regulations, and other SED directives which should be considered in developing individualized program plans.
3. Recommendations for local site visits in New York State where major attempts to provide occupational guidance and individualized occupational programs had been instituted.

SED regulations and State Policies relevant to the research topic were obtained and reviewed by the staff. These directives and policies have been incorporated into our work. As a result of these meetings, local site identification and visits were scheduled to document the programs. A total of 16 local schools were visited in 1978. These site visits assisted the staff in identifying or confirming the following priorities:

*Also see Appendix B which summarizes the discussions of the participants in the ISSOE Steering Committee meeting at the Sheraton Inn in Ithaca, New York on 29 and 30 January 1979. Participants included SED personnel, Directors of Vocational Education Programs, Guidance and Placement Coordinators and teachers of vocational education subjects.

1. Student-oriented counseling activities are requisite to informed decision-making by students. Such decisions are the basis of individualized education programs which focus on student characteristics.
2. Teachers are rightly confused by the term "individualized education." It has no commonly understood operational definition. Operationalized definitions will need to be identified and their concomitant assumptions, theoretical foundation, and research basis explicated.
3. Materials will need to be developed to help teachers individualize occupational programs. A wide range of options must be provided to reflect the diversity of local school priorities and programs.

Literature Review

A formal review of the literature was conducted concurrently with the site visits. The review sought (1) to provide an operational definition of "individualization," (2) to identify the major components of individualized education programs, and (3) to identify characteristics and results of major research and development efforts in the area.

The literature review was used as the basis for developing three products for distribution to the field. First, a project brochure (Appendix A) was developed and reviewed by SED, area facilitators, regional coordinators, and occupational teachers. This brochure identifies four components of individualized programs and relates each to ISSOE materials.

The second product to be developed was a teacher guide resource book on decision-making for students in occupational education. This booklet provides teachers with a rationale for encouraging students to make

decisions. It presents lists and descriptions of readily available, low-cost materials for classroom use, and an analysis of "tests" available to help students analyze their interests, aptitudes, and goals.

The final product which grew out of the literature review was a teacher manual to help clarify the major issues in individualizing education programs. This booklet defines the major components of individualized programs, provides a short review of research and programs in individualized education and provides the teacher with a methodology for preparing Individual Program Plans (IPPs) and Individual Education Plans (IEPs) for students.

Select Appropriate Occupational Clusters

Two ISSOE curricula were selected for research and development activities. Selection of Business/Office Occupations and Automotive Mechanics was the result of advisory committee meetings, discussion with the project monitor and other State Education Department Staff. It appeared to the project staff and SED personnel that these two curricula were well developed and potential field-test sites would most likely utilize ISSOE materials in these occupational areas.

A second consideration in selecting these curricular areas was that the Student Reporting System project had conducted preliminary work (1977) in auto and office skills and the progress of that project would be expedited by continuing to develop the reporting methods in those areas. Since materials from the Student Reporting System project will eventually connect with the materials from the Student Planning System project, it was decided to secure that compatibility from the beginning.

In various meetings with CIOE staff, SED, and the Advisory Committee involved, the close articulation of student planning and program development with student reporting was repeatedly stressed. Hence, the decision was made to utilize office and automotive programs in our development and field-tests. Hindsight confirms the wisdom of these early decisions.

Develop Systems and Materials

Developing a system of individualized education has been a process of identifying a rational planning model and developing materials which will assist teachers in individualizing occupational education programs. As stated earlier, the system which was of interest to the staff included planning for individual student differences and also the reporting of student achievement in the form of competency reports and employability profiles. This overall system is represented in Figure 1. Each step in the system has behavioral implications for local administrators, teachers and students. These will be considered here in detail.

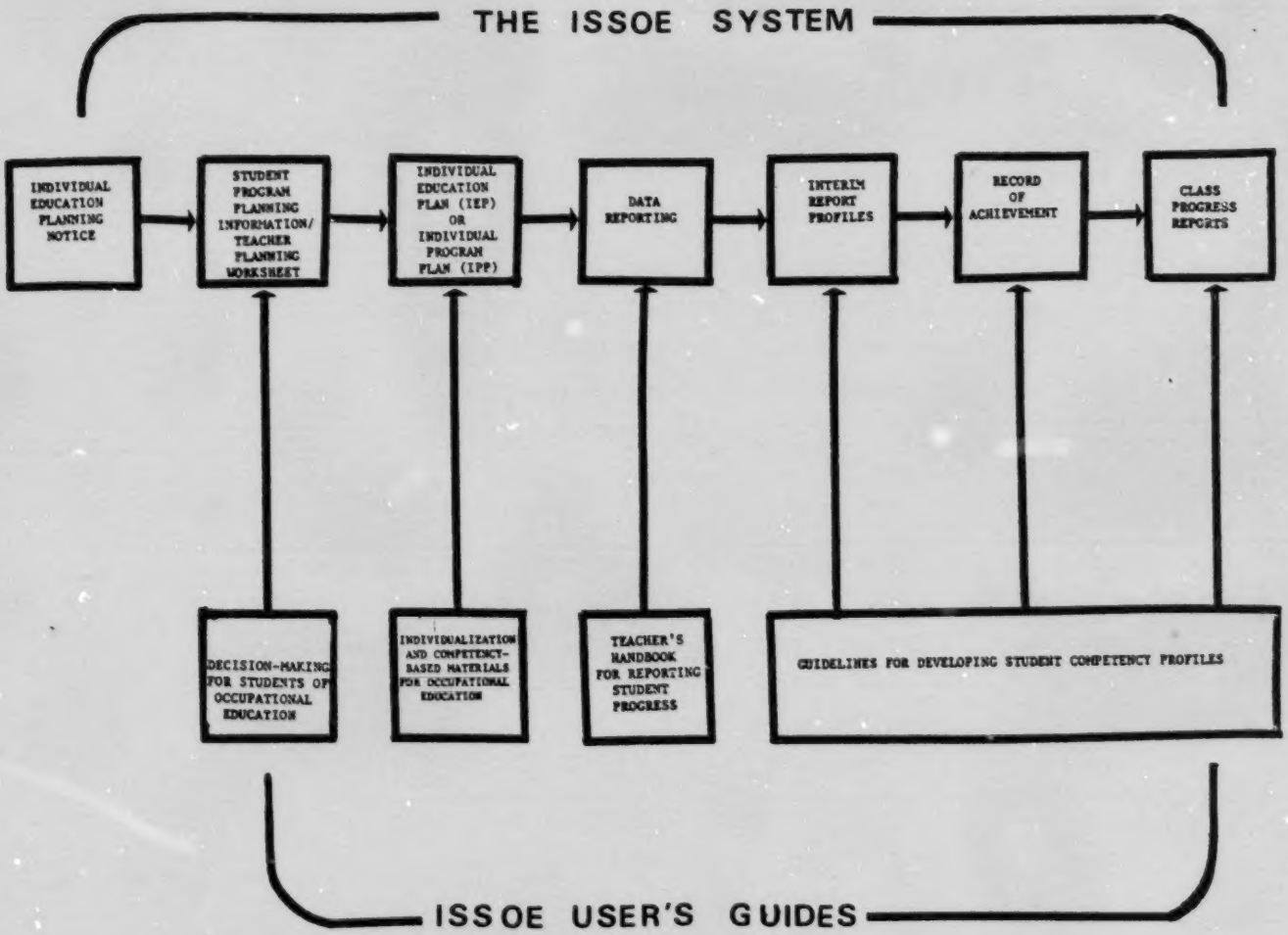
(Step 1) Notice of Planning - At this point a formal notice is sent to individuals who will participate in a program planning meeting. The date of the planning session should be coordinated to permit the best possible representation of those individuals thought to be critical to effective planning.

Planning for students identified as "handicapped" must meet state and federal regulations which specify those who will be involved in planning. Local policy, however, will determine which of the following persons should be included in planning for other students:

- the student
- the parent(s) of student
- administrator(s)
- guidance counselor(s)
- consultant(s)
- other specialists.

Some New York schools have set a goal of developing formal, individualized program plans for every student enrolled in an occupational program. It

FIGURE 1


THE ISSOE SYSTEM
INDIVIDUAL EDUCATION PLANNING NOTICE
STUDENT PROGRAM PLANNING INFORMATION/ TEACHER PLANNING WORKSHEET
INDIVIDUAL EDUCATION PLAN (IEP) OR INDIVIDUAL PROGRAM PLAN (IPP)
DATA REPORTING
INTERIM REPORT PROFILES
RECORD OF ACHIEVEMENT
CLASS PROGRESS REPORTS
DECISION-MAKING FOR STUDENTS OF OCCUPATIONAL EDUCATION
INDIVIDUALIZATION AND COMPETENCY-BASED MATERIALS FOR OCCUPATIONAL EDUCATION
TEACHER'S HANDBOOK FOR REPORTING STUDENT PROGRESS
GUIDELINES FOR DEVELOPING STUDENT COMPETENCY PROFILES
ISSOE USER'S GUIDES

is recognized that planning for 40 to 60 students per teacher may, of necessity, limit the number of persons that may be involved in individual student planning. Indeed, the single most consistent comment we received on the Student Planning System centered on the potential overload for teachers and administrators.

(Step 2) Student Program Planning - A prerequisite to developing an individualized education program for a student is the accumulation of a minimal amount of knowledge about the student. The literature review led us to believe that an important source of information was available directly from the student and that this information could be tapped with instruments designed at various levels of sophistication. It was also obvious from our site visits that schools were also at different levels of sophistication with regard to the kinds of information the staff was accustomed to utilizing. Based on these observations, it was decided to attempt to build a system that could operate on a wide range of information, in response to staff capability.

At a minimum, if an individual plan is to be prepared, the teacher must (1) assist the student in specifying a goal or goals, and (2) determine how realistic the goal or goals may be.

Teachers have indicated a need for information designed to assist students in the career goal decision-making process. In order to help fill this void, a teacher's guide to materials and

instruments dealing with occupational decision-making which could be used to supplement regular course content was developed. The guide has been evaluated by teachers, SED and ISSOE researchers. It has been found to be both effective and valuable.

Theoretically, a student may, after some career exploration has taken place, discriminate among job titles for which a selected vocational course is likely to prepare the student. The validity of this choice may be questioned (and probably should be) but the right of a student to select educational goals is irrefutable. If an unattainable goal is selected, the educator has the responsibility to counsel the student and to obtain professional counseling service as required and available. However, it is still incumbent upon the teacher to assist the student in reaching his/her goal(s).

To the extent that the student has been able to make a reasoned, appropriate goal choice, the Individual Program Plan can specify how the student is to achieve that goal.

(Step 3) Individual Program Plan - An Individual Program Plan (IPP) or Individual Education Plan (IEP) is a list of student objectives and, if required, the auxiliary services which will be the focus of student learning activities for a specified length of time. There are a number of options available to developing IEPs or IPPs. These are discussed below:

(1) Teacher Generates Total Plan - A teacher may generate an IPP/IEP for every student in his/her course if sufficient training and resources are provided. The literature review found several examples where teachers had been trained to use manuals and guides to generate the total plan. This option often incorporates computer capabilities to develop IPPs.

It is our opinion, based on our discussions with teachers, administrators and curriculum developers, that it is probably not reasonable to expect teachers to generate the total IPP/IEP without extensive training. Further, materials development are extremely expensive and time-consuming activities. An extensive, long-term commitment would be needed if this option was seriously considered.

(2) Teacher Selection of Basic IPPs/IEPs - It was the consensus of teacher committees, regional coordinators and SED personnel that a large portion of the students graduating from a given occupational program go into a relatively limited number of job categories. If this is the case, the ISSOE curriculum objectives pertinent to a given job (or job cluster) can be specified in advance through task analyses of specific jobs. Teacher and students are therefore able to exercise limited choices among those jobs which represent realistic job opportunities.

Generation of IPPs for a small number of specific job titles or job clusters may be done through task

analysis and verification. This option has been fairly well developed and has the additional advantage of feeding directly into the Student Reporting System.

(3) Teacher Conducted Task Analysis - A third option in specifying IPPs/IEPs is to allow the student to select from a fairly wide range of possible job titles or clusters within a given program or related programs. Assuming a job is selected for which a relatively well-written and comprehensive position description is available, it is possible to conduct a task analysis based on the position description and to identify those major competencies which are relevant to a given job or job cluster. These competencies are translated into curriculum objectives for the student. The list of objectives, in essence, becomes the IPP/IEP.

The advisory groups with which the staff met thought Options 2 and 3 should be worked through and presented in a teacher guide to developing Individual Program Plans or Individual Education Plans for occupational students. This task was accomplished.

Test and Revise Products

Student Trial of Individual Program Planning Information (IPPI) Form

In April of 1979, two regional coordinators were asked to contact three to five automotive mechanics instructors in their regions, to secure their cooperation in getting a sample of first year students to respond to the IPPI form (Appendix D). Each teacher was to solicit the cooperation of a small number of students (1-5 was the range). After students completed the the student portion of the form, each teacher was requested to complete the Teacher Planning Worksheet of the IPPI. Thirty IPPI forms were returned to the regional coordinators who returned the forms to the project staff.

The results of this test of the form led to two conclusions. First is that students had little difficulty in completing their section of the form. Specifically, students were able to:

1. distinguish among the job titles provided on the basis of how desirable the specific job appeared to each.
2. identify long-range employment goals. About 85 percent of these 5-year planning goals are related to present training, but approximately 15 percent of the students selected goals unrelated to training.
3. describe their work experience in the areas of training. About 50 percent of the students had paid work experience and 20 percent had unpaid work experience.
4. indicate who had influenced their choices. Students selected a variety of options although 12 of 31 (39 percent) stated that they had relied on their own judgment, exclusively.
5. report their academic grades in comparison with other students.

Second, teachers were, with only one exception, either unable or unwilling to complete the Teacher Planning Worksheet. Responses from the regional coordinators indicate that both appeared to operate in each region. Most teachers responded to Questions 1-4, with one teacher completing not only the other questions but, in addition, the individual plan was also generated for four students.

On the basis of this test, we decided to convene a panel of teachers to discuss the planning system in some depth.

Business-Educators Product Review Panel

On 28 August 1979, a group of five business educators from various geographic and academic/educational areas met at Cornell University to evaluate several ISSOE products. The meeting was chaired by Mr. Dan McGillicuddy. The panel had five main tasks to complete.

Task I - Prior to the meeting, each participant was asked to read a list of job titles with Dictionary of Occupational Titles (D.O.T.) position descriptions and to determine if the job title was an accurate representation of the duties performed in the job description as written.

Generally, the titles were considered acceptable, while minor additions and deletions to most of the descriptions were noted. These minor modifications were expected since it would be very difficult for total agreement to be achieved within a group of professional educators on a detailed list of duties required for any particular position.

Task II -This task required the participants' indication of the extent to which students in their program area find jobs immediately upon graduation. The areas of Clerk-Typist and General Clerk were often identified as areas of immediate employment. Payroll Clerk and Bookkeeper were identified as areas where students rarely find employment immediately upon graduation. These findings tend to indicate that graduates find jobs primarily at the entry-level and that advance-level positions are not readily available to them.

Task III-The participants were asked to indicate the degree to which students in their program area are prepared for entry-level positions immediately after graduation. The major finding evident from this task was that 80 percent of the participants indicated that no training in Keypunch Operation was offered in their programs, yet Task II revealed that often their students receive employment as Keypunch Operators. This led to speculation that some skills, for example typing, are transferable.

Task IV - This task asked each participant to read a position description from the D.O.T. and indicate (1) the frequency which the listed competencies are performed for that position and (2) the relative importance of each competency with respect to the position being rated. These results were then summarized by the project staff and compared to lists of ISSOE competencies recommended for each position.

For most of the job titles offered, the participants supported the inclusion of the ISSOE competencies currently in use. Occasionally the participants indicated one or two additional competencies which they felt should be added; sometimes one or two were recommended for deletion but the inclusion of those was always supported by the D.O.T. position description. For a few position titles, the business educators were split as to both frequency of performance and importance of the competency. Yet in each of these cases, the D.O.T. position description supported the inclusion of the ISSOE competencies. The project staff interpreted this inconsistency as a reflection of the overall, nationwide perspective of the D.O.T. as opposed to the "local state-of-the-art" voiced by the educators.

Task V - This task asked the business educators to evaluate some ISSOE materials which had been prepared by CIOE. Summaries of their comments are included.

PRODUCT: Teacher's Guide on Decision-making

Most of the participants were highly positive in their comments regarding this booklet. It was noted that final and full endorsement could only be given after the materials had been used in the classroom.

PRODUCT TITLE: IPP: OPEN

This was one of the three forms designed to assist educators in planning individualized programs for students. Development of an Individualized Program Plan (IPP) is crucial for individualization of instruction. This one form in particular allowed total flexibility in development of the IPP. No competencies were recommended and thus the form offered "total individualization" and the potential for cross-program planning.

The review panel determined that although availability of this form might promote its use, the format generally was too time-consuming for most teachers.

PRODUCT TITLE: IPP: TASK ANALYSIS

This IPP form grouped various competencies by their related units. That is, all the competencies needed for "communications" were clustered, all for "word-processing" were clustered, and so on.

The review panel favored this format, indicating that it was practical, efficient and flexible.

PRODUCT TITLE: IPP: D.O.T. TITLE

This IPP listed several D.O.T. position titles with the respective ISSOE competencies listed underneath the title.

The business educators felt that this form offered some strengths over both of the previous forms, but was very cumbersome, restrictive, redundant and did not readily lend itself to cross-program planning.

PRODUCT TITLE: ISSOE LEAFLET (APPENDIX A)

This publication was greeted warmly by the participants who felt it would be of great value in explaining the purpose of ISSOE. However, the group strongly felt that the organizational relationship between ISSOE and SED should be explained. It was felt that this would give ISSOE greater impact with the rank and file educational community.

PRODUCT TITLE: OCCUPATIONAL PREPARATION PROFILE

The respondents felt that criteria for differentiating "Outstanding," "Skilled," "Satisfactory," and "Satisfactory with Supervision" need to be detailed. It was also recommended that length of the program and the date that the program was completed should be indicated on the form. There was a great concern for avoiding student falsification of this record and suggestions were offered. Most agreed that it was a fine reporting tool.

Dissemination Activities

Efforts during the past year aimed at the dissemination of project activities occurred via six avenues. First, an article titled "Individualizing the ISSOE Program" was included in Career Commentary, Vol. IX, Spring-Summer, 1979. A copy of that publication is included in Appendix E.

Second, meetings were held in eleven regions at which ISSOE Project Directors made short presentations on the project and solicited comments from the participants.

Third, the ISSOE "Individualizing Education" brochure (Appendix A) was mailed to thirteen regional coordinators during the spring and summer of 1979.

Fourth, meetings were held with industry representatives, ISSOE educators (22 August 1979) and business educators (29 August 1979) to discuss progress on various ISSOE projects and materials.

Fifth, a presentation of the ISSOE Planning and Reporting Systems was made to the faculty of the Metropolitan Technical Community College, Omaha, Nebraska, on September 1979, entitled "Competency-Based Vocational Education--Making It Work." This presentation was made at no cost to the project.

Finally, project activities will be disseminated through the teacher's guides on individualizing competency-based occupational education and decision-making.

Recommendations

The findings of this phase of ISSOE research indicate that the current efforts aimed at improving student guidance materials and the development of materials for planning individualized education programs are meeting the needs of ISSOE teachers. Extensive contact with practitioners had led to the identification of specific needs; this phase helped to meet these needs. A variety of options for assessing student career awareness, assisting in student decision-making, and developing of individualized program plan forms have been completed, trial-tested and disseminated. These activities have been articulated with ISSOE research projects involved in data reporting, interim report profiles, records of achievement and class progress charts.

The recommendations which follow are intended to result in a great understanding between those who research and develop ISSOE products and the users of the ISSOE materials.

RECOMMENDATION NUMBER ONE

The booklets on career decision-making and individualization need to be disseminated and field-tested with ISSOE participants. Although the decision-making booklet has been evaluated by business educators, other ISSOE teachers are not aware of its existence. Along this same line, the booklet needs to be evaluated by teachers who have sought to implement some of its programs.

Likewise, the individualization booklet needs to be evaluated both by teachers who are active in the ISSOE system and those who are new to ISSOE materials. Then the true value of these two products will become evident.

RECOMMENDATION NUMBER TWO

Field-testing and implementation of the Student Program Planning Information/Teacher Planning Worksheet, needs to proceed. At the same time, extensive field-testing of the six options for developing Individual Program Plans (IPPs) and Individual Education Plans (IEPs) should proceed. Then ISSOE researchers will be able to validate their prototypes; the various components of the ISSOE pupil guidance and planning system will have been evaluated by classroom teachers. And only then will ISSOE researchers be able to identify additional local needs which must be met in order to meet SED's goals of statewide implementation of ISSOE.

ISSOE products must continually be evaluated and revised in order to afford the options and flexibility needed for effective implementation. The most serious charge that could be leveled against ISSOE would be inflexibility or inability to adjust to local needs. It would be inappropriate to publish booklets on individualization of ISSOE materials in order to fit pupil needs when, in fact, ISSOE itself was not "Individualized" to meet the individual teacher/district needs. To avoid this condition, the products developed must be disseminated, field-tested and rigorously evaluated. The materials must (1) meet local needs and (2) be articulated with other ISSOE components.

RECOMMENDATION NUMBER THREE

In order for Recommendation Number Two to be successfully accomplished workshops need to be held at various locations throughout the State of New York, explaining to participants the individualization forms and how to use them (via the teacher's guides). Research in other fields has proved that teachers will not implement new materials without technical assistance and training. ISSOE materials probably will not be an exception to this rule. Not only are initial, explanatory workshops needed, but follow-up assistance on a regular schedule (every month or so) must be provided to allow teachers opportunities to voice their concerns and problems

to ISSOE researchers. The teachers must feel that they have a direct voice in the materials development and revision. Similarly, they must feel they have direct communications to consultants when problems arise. Thus, it is crucial that the ISSOE research staff be involved in all aspects related to pupil guidance and planning and be both willing and able to go into the field.

RECOMMENDATION NUMBER FOUR

One of the missing links in the drive toward implementation and individualization of ISSOE is the lack of instructional materials which have been identified as compatible with ISSOE and have met with success in actual practice. ISSOE curriculum materials have detailed the necessary objectives, competencies, and sequencing patterns for individualized education. Likewise, materials on career decision-making and individualization of competency-based occupational education programs have been developed. Finally, forms for individual pupil reports of interests and career aspirations, teacher program development and generation of IPPs or IEPs have been designed. But still teachers do not know what instructional support materials work best for teaching a specific competency to a specific pupil. Teachers justifiably want, and need, lists of materials which other teachers have found successful for teaching the specific ISSOE competencies. Therefore, if ISSOE desires to be cognizant of, and responsive to, local needs, such lists must be both compiled and disseminated.

Summary

This report reviewed the major activities of the ISSOE Student Guidance and Personalized Occupational Education Programs project. The major findings of the project are summarized and recommendations made which may be followed by the State Education Department to ensure the continued acceptance and support of ISSOE products by occupational educators in New York State. The findings of this phase of research indicate that many occupational education teachers are willing to assist students in career decision-making, provided that appropriate technical support materials have been provided.

Four recommendations for ISSOE implementation were made. They are:

1. Extensive dissemination, field-testing and evaluation of the booklets on decision-making and individualization of occupational education programs.
2. Implementation and field-testing of Form II, Student Program Planning Information/Teacher Planning Worksheet. Simultaneously, implementation of the six options for developing Individualized Program/Education Plans should proceed.
3. Workshops, where main themes are to assist occupational education teachers in implementing Recommendations 2 and 3, need to be held at various locations throughout the state.
4. Lists of instructional support materials, which have been identified as compatible with ISSOE and have met with success in actual practice, need to be compiled and disseminated to ISSOE teachers.

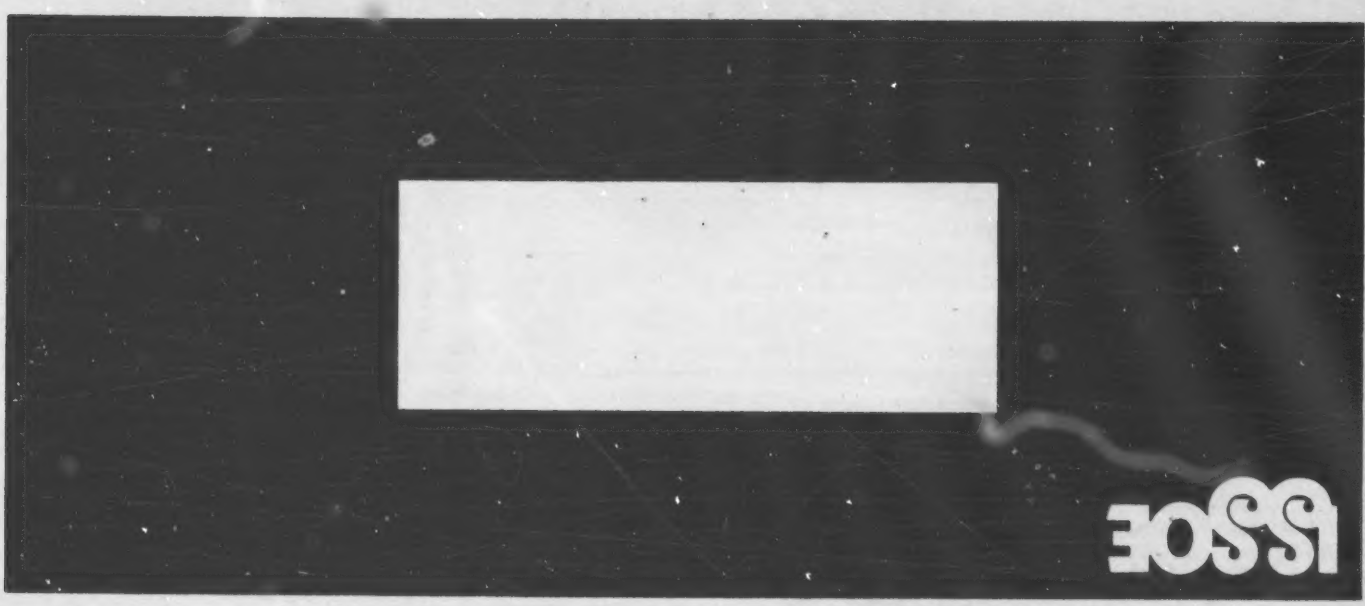
Appendices

27

APPENDIX A

ISSOE LEAFLET

For more information regarding ISSOE please contact:



Instructional Support System for Occupational Education

ISSOE

Individualizing Occupational Education with ISSOE

What is ISSOE?

ISSOE is an Instructional Support System for Occupational Education. It has been designed to help teachers identify job-related skills and to translate those skills into teaching objectives. ISSOE assists the occupational educator meet the wide range of student interests and abilities found in most educational systems.

The driving force behind ISSOE is the belief that teachers and students benefit from curriculum and instruction that are based on the world of work. One of the benefits is increasing the flexibility of the curriculum. Individualization is not only possible, but encouraged.

Individualized Education?

Individualized education is a philosophy as well as a method of teaching. As a philosophy it stresses the rights and interests of individuals. These rights include the selection of educational objectives that are relevant to an individual's goals. It further expects that a group of twenty students may have twenty different career objectives in mind at a given time.

In practice, individualized education is always a matter of degree. The teacher who varies the program or method of instruction, based on student needs and preferences, is, *in fact*, individualizing education.

Elements of Individualization

There are four major elements of individualized programs: setting objectives, learner assessment, teaching and learning strategies, and evaluation and feedback. Teachers should consider each of these components as it applies to their own classrooms.

1 Setting Objectives—In traditional classrooms, everyone works toward the same (or very similar) objectives. In individualized classrooms, provision is made for students to help select objectives.

ISSOE curriculum modules allow the teacher to select specific, job-oriented objectives that match student career goals and learning objectives.

2 Learner Assessment—Teachers have always assessed the performance of their students. However, assessment has typically been at a time convenient to teachers and has often been used just for grading.

ISSOE has developed criterion-referenced evaluation measures. These can be used to assess learner competencies, and to plan individual occupational education programs once student goals, abilities, and interests are identified. Since ISSOE is modularized, it is possible to start students at different points in the program, based on their characteristics and on the teacher's professional judgment.

3 Teaching and Learning Strategies—Educators know that individual learners differ greatly in their ability to profit from various instructional media and methods. Teachers also vary in their ability to use different teaching strategies effectively.

ISSOE has identified major goals for instruction and suggestions for learner assessment. Professional expertise is required to make judgments about selection of materials and teaching strategies appropriate to specific students and subjects.

4 Evaluation and Feedback—Traditionally, student assessment practices have been norm-referenced and grade-oriented. Teachers were expected to follow the practice of giving a certain percentage of As, Bs, Cs, and so on. Students were compared one to another to arrive at evaluation standards. Feedback was offered systematically only in conjunction with grading periods.

Since the ISSOE curriculum is composed of measurable objectives, the student's performance is measured by the teacher against a job-relevant standard of performance. This still does not preclude evaluating students on criteria such as attitudes and social skills. But it does help the teacher be sure to assess student performance on job-related skills.

For Teachers

Developing educational programs to meet the unique needs of individual students has always been a problem. Many teachers have found ISSOE materials to be of assistance. Each skill has been reduced to its basic components. The components are the content supporting each module. The modules contain specific objectives, assessment procedures and evaluation and feedback provisions. Thus, students are allowed to progress through the modules at their own pace and are not required to "keep up" with the rest of the class. Likewise, accelerated students may move through the modules at a faster rate. For the teacher, most of the pre-class preparation for meeting individual needs of the students has been completed.

APPENDIX B

MINUTES OF ISSOE STEERING COMMITTEE

Sheraton Inn, Ithaca, New York

29 and 30 January 1979

ISSOE GUIDANCE AND IEP PROJECT

DINNER MEETING

DISCUSSION PARTICIPANTS

Douglas Adamson
ISSOE Regional Coordinator

Vern Beuke
Cornell Institute for Oc. Ed.

Joseph Carr
Auto Mech Teacher

Gill Ferris
Guidance Counselor

Maryann Gauger
Vocational Counselor

James Morton
Trade Electricity Teacher

Jerry Musso
Office Education Teacher/Coord.

Terry Reily
ISSOE Regional Coordinator

Jonathan Roman
Placement Coordinator

Treasure Signor
Nursing Assisting Teacher

Philip Soyring
Auto Mech Teacher

Gerry Zinczyn
Placement Coordinator

Pellegrino (Duke) Zuzio
ISSOE Regional Coordinator

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University

INSTITUTE FOR OCCUPATIONAL EDUCATION

ISSOE STEERING COMMITTEE

Dinner Meeting : Topics of Discussion

1. How do you define "individualization" within an occupational education classroom?

   a. informal self-directed learning
   b. diagnostic prescriptive programming
   c. meeting special learner needs
   d. alternative instructional methods
   e. " " materials
   f. other

2. If it were mandated that all occupational programs were to become "fully individualized," what changes would have to be made to existing programs?

   a. smaller classes
   b. paraprofessionals hired and trained
   c. new and/or more teaching materials
   d. teacher inservice training
   e. record keeping assistance
   f. other

3. What impact has or will "mainstreaming" have on the occupational educator?

   a. additional work
   b. new roles required
   c. closer coordination with other teachers/depts.
   d. impossible to say in advance
   e. not much
   f. other

4. What guidance function do occupational educators serve?

   a. information
   b. planning and decision-making
   c. values clarification
   d. mentoring
   e. none
   f. other

I S S O E

Steering Committee Meeting

January 29 and 30, 1979

Cornell University, Ithaca, New York

Outcomes:

A. Proceed with field test phase of the Student Reporting System for ISSOE.

- Teacher-student needs to be the major concern this year.
- Survey teachers in test sites to determine their needs.
- Act upon recommendations and concerns voiced by Steering Committee members at the meeting. (Review minutes)

B. Investigate methods for enabling teachers to individualize ISSOE programs.

- In-class career planning by students and teachers.
- Acknowledge institutional restraints on individualization.
- Collect and organize information on individual students.
- Work with teachers, counselors and administrators to develop methods and materials.

CORNELL INSTITUTE FOR OCCUPATIONAL EDUCATION

MINUTES OF ISSOE EXECUTIVE COMMITTEE MEETING January 29 and 30, 1979
Sheraton Inn, Ithaca, New York

I. Introduction and details - Al Edsall

II. Update, ISSOE system - Doug T. Adamson

- A. Educator identified Competencies
- B. Validation with business and industry
- C. Student reporting system feedback* *CIOE concern
- D. Futures
  1. Resources necessary to teach these competencies
  2. Methods of teaching these competencies

III. State of ISSOE - Peter Cooke

- A. Tendency to focus on "product" should attempt to focus on "process"
  1. Individual class planning
  2. Over-all institutional planning with roles for the users of the system. (Handout to participants)

IV. ISSOE at Cornell - Jim Dunn

- A. (Handouts of charts) with ISSOE components, ISSOE participants, flow chart for planning on reporting system for ISSOE students
- B. Cornell's commitment, 1978-79 validation of the student reporting system with implications for dissemination (flow chart) along with assisting in the staff development component
- C. Discussed the problems of using outcomes as an evaluative technique for ISSOE.
  1. Options for Reporting:
     - a. Chart of competencies (Profile)
     - b. DOT Chart with competencies for that occupation (Profile)
     - c. Employability Profile

V. Dissemination of ISSOE report from last year - Al Edsall

Handed out and discussed summary report of the 1977-78 ISSOE Student Report Planning Year. Have since updated reporting outputs.

VI. Projects underway - Vern Beuke

- A. The Dissemination Effort
  1. Review of the Literature
  2. Compilation of the papers of consultants - "Implementing Change in Vocational Education"
  3. Specifications of models and implementation strategies in vocational education - Discussion of variables in implementing innovative programs
- B. Guidance and IEP Project - How you make the program relevent to the needs of the child is the Question?
  1. Methods and materials for occupational education
  2. Guidance roles for ISSOE:

a. Helping students to develop competencies
b. psycho-social adjustment
c. decision-making
d. remedial services

VII. Status Report - Nassau BOCES ISSOE Implementation - Duke Zuzio

A. Modularized the automotive shop curriculum.

1. Meeting the needs of all students

B. Have a media center for audio-tutorial purposes of instruction.
C. Had an orientation session for students involved in ISSOE on. exactly what it is.
D. Daily report forms on every student are used.
E. Use a skills achievement book with copy for every student.
F. Creation of folders:

1. Competency folder with the daily report
2. Personal evaluation folder (affective domain??)
3. Achievement books (grades?)

G. Needs to be addressed

1. Clarify grading system - perhaps computer grading - teachers are looking for simplified grading procedures.
2. Entry-level skills for the first years employment - Employers expect too much. They have gone out with their students to employers to explain what the competencies mean. ISSOE can be frustrating, but has been very rewarding particularly with special needs students. If ISSOE is to be judged on employability, than the special needs youngster (and their capabilities) must be taken into account.
3. Paper work .... teachers resent this.
4. How do you evaluate performance on a one-to-one basis? (process or end product?)

VIII. ISSOE Progress Charts and Reporting - Joe Carr - Monroe BOCES #1

A. Daily report form (handout)
B. Progress Chart - very positive about how ISSOE has enabling teachers to chart student progress
C. Evaluation-Competency Report (handout) goes to guidance, teacher, parents, co-op ed-for job placement ... questioned how these can be put in the computer ... advocated simplicity in report forms since validation will, inevitably, come from teachers.

VIX. ISSOE Student Reporting System Field Test - 1978-79 - Al Edsall

Presented and discussed proposed class and student reporting formats:

A. Class Progress Chart - using ISSOE Competencies
B. ISSOE Student Mastery Profile:

1. DOT Job Titles Matched to ISSOE Program
2. ISSOE Program Competencies matched to DOT Job Titles

END OF FORMAL SESSION NOTES:

NOTES: Comments made by the group during the above session.

P. Cooke emphasized, along with D. Adamson, the need to keep in mind that the system is designed for teachers for use with students in designated local regions and that we must "fit things that are needed into a local framework".

J. Rose, "As a Labor Exchange we(State Employment Service) feel we should be some place in between the school and the employer in many of the placement situations. Also, our record keeping systems are all numerically based because of DOT format and we would prefer to see DOT numbers with all DOT Titles."

D. Adamson commented on home-economics and other "unpaid work" as needing competency-based programs. Work is underway in N.Y. in these areas.

C. Benenati asked about delivery systems for assessment...say an audio-tutorial system for a shop is a good assist.

J. Dunn (answer)... Some schools do a great deal with individualization. Other districts may do little or nothing. We're talking about a system for ISSOE that will test competencies without allowing the program to be evaluated only at the end - without regard to individualization, we need a front-end component of the "game plan".

C. Benenati was concerned that the feedback system not further tax the classroom instructor and that we devise a system with simplified input that can be machine-sorted for various audiences (i.e.-parents, educators, employers,etc.)

J. Carr agreed with Vern's comments that IEP should not just be for the special needs students and that cutting down the number and the range, depending on the ability of the students, is a good idea.

H. Dworetzky asked about the complexity of the competency evaluation sheet.

C. Benenati raised the possibility of the use of peers (i.e.-foreman) to help in evaluation. D. Zuzio said this had met with limited success. The final evaluation must come from the instructor.

D. Adamson pointed out that (1) it depends on the program area whether process or product can be evaluated and (2) hierarchical skills may enable us to evaluate at a different level with other skills subsumed under larger categories of competencies.

A. Edsall, during the program design discussion, pointed out that the problem with the employability profile has been to get the employer to understand that these are entry-level competencies..."What can the student do and at what level?"

J. Rosa wants figures on ISSOE and said, "DOT job descriptions talk about jobs and not people. There really is no inconsistency as both employers and placement staff realize, or should realize, that students coming from training programs are not as adept as workers with years of experience. We use a special entry to designate entry workers so they are identified as such.

C. Benenati, "Is the DOT information the necessary format for the ISSOE objectives?

J. Dunn, "It allows you to give feedback in a meaningful way - makes the range less formidable to the student and to the employer. Keep in mind, after we identify the competencies for entry-level jobs there will always be someone who thinks we should have one more."

R. Schneider, "Do the Mastery Profiles lead employers down a false path? Perhaps we should have a note on the bottom which indicates that there is more information at the school.

There was much discussion about the specific format for the field test, i.e.:

1. Can paid employment be identified?
2. Accessing secondary levels of information? Accessibility and utilization - items, speed and rate of mastery may be more helpful.
3. Are we trying to get too much information to individuals receiving the information? (parents, guidance counselors, etc.) What is needed is one input from teachers with selective output. A recent survey (by Rudy's BOCES?) indicated that employers are less interested in skills, psycho-motor, etc. than other, less measurable areas (i.e. attendance, neatness, promptness, attitude) (Is that ever a Pandora's Box!)

G. Ferris said that teachers and employers don't understand DOT and that the needs of employers at each local level are necessary input.

D. Adamson summarizing,

1. CIOE better check out the users to see if this is information they really want.
2. We need a reporting system that provides feedback fast. Pick a very typical situation that guarantees feedback...doesn't matter whether it is positive or negative. He was concerned about language in reporting to target groups. How are employers viewing employability profiles? What are their needs? The systems must interact.

NOTES: Morning Session - January 30, 1979, Sheraton Inn, Ithaca, New York

I. Review of the ISSOE System - Al Edsall

A. Needs

1. Approval for field-testing strategies.
2. Proper audience for field test-labor department, teachers, administrators, students, employers.
3. Review of process for field test.
4. IEP and guidance phase - Needs - Vern
5. DOT & ISSOE match Tables.

END OF NOTES ON FORMAL SESSION:

Comments made during the discussion period:

Carl, "The system has to provide information for a number of publics. The form needs to bear this in mind plus it should be a one-shot simple deal for teachers. The instructions should be all inclusive and the machine should break down the information. (2) We need questions that identify entry-level skills.

Ed, "We need a system that will link with the labor department. Will one document serve these five publics?

Jim, "We propose to use one document to educate our various publics to look at, to critique - We propose to use the DOT for this format.

Ed,"What about parents?"

Answer, "If it is a priority in a region there should be a way to involve them.

Doug, "The issue is will one form serve the needs of all the publics?" Is there a way to come up with a document that informs parents? "We don't have to design the whole system in one year. We need to establish priorities and instructional support for professional staff is our first priority.

Carl, "Parents and employers want the same information. Some of the data may serve more than one public. The key is that we don't overload the teachers and we serve the various publics.

Al,"The issue is: Can the DOT's serve the ISSOE system?"

Doug, "How do you 'massage' the same data for different publics?"

Ed, "Do we know the needs of the various publics? Should we survey the various publics and then give them the kind of information they want?"

Doug, "Teachers and guidance people may need one kind of information (specific) and others may need more general information.

Ed, "Could regional coordinators help with this?"

Jim, "We've received nothing but good feedback on the involved form. I think the new form is adequate." (Monroe BOCES)

Peter, "Is the form to be used as a monitor or as an implement to action? One thing we need is that the information is geared toward decision making and/or action."

Dick, "We're looking for assessment of competency right now. The problem has been how we translate these competencies into a percentage or grade for the home school."

SUMMARIZING COMMENT: The major issue I was hearing here is: will what meets the needs of teacher, administrator, counselors, for grades, evaluation, etc. and will it dovetail with the needs of employers, parents, and others. We need to know what these constituencies want and need. Do we know that?

Duke, "The regions need an instrument that will enable them to gather information with a one-shot deal. (That came through loud and clear.) Can we develop a package for each coordinator to use as a sample format and keep in sufficient detail but keep it simple? (cute trick!) Can we come up with such a form for the field?"

Al, "The orientation and information packages can contain some of these options."

Carl, "There may, sometime in the future, be a data band for teachers so they can see how "they measure up".

Doug, "I can't envision the 'norm' system again. This is either the student has learned or not, 'go or no go'. The purpose of this system is to help instructors improve their strategies. What we're talking about is using the same information but "arranged differently."

MAJOR QUESTIONS:

1. Do we know what kinds of information the various publics need?
2. Can we get the information with one form?
3. Can we devise methods (programs) that provide varying outputs?

Jim, "We need to plan for (1) how to support instructors (2) effective functioning record system emphasizing, what are the important things to know about students (3) where to start in the field, collecting samples - what's feasible?

Doug, "This advisory group has moved from a 'steering'function to concerns. CIOE should concentrate on student-teacher needs this year. What is needed developmentally, is to think of designs for administrators, employers, etc. Cornell will work in specific locations with specific groups to locate their needs. This committee has raised concerns and given direction. Now we need to move into action in the field. I recommend three locations."

Harold, "Would like to see various models identified and duplicated so that teachers can see programs."

Jim, "There are two questions being discussed: How do you implement change in reporting systems and how do you develop a new reporting system? What are the needs?

Mike: "When looking for test sites look at existing systems (Rochester, Broome-Tioga BOCES, Onondaga BOCES, and Oswego were mentioned as test sites) and utilize students (recent graduates and ISSOE students) in devising the system."

The suggestion was made to look at a small school, new to ISSOE with a limited reporting system. We need to not oversell the system and keep in mind that the local systems will be doing the vast majority of the work.

FOCUS FOR CIOE THIS YEAR - Jim Dunn

1. Teacher - student needs.
2. Three districts with instructors, administrators and ISSOE regional coordinator.
3. Continue to consult with the group.
4. Two areas of tasks:
   a. Student reporting systems operational on a prototype basis
   b. Developmental work on employers, administrators - with expansion to other areas from business, automotive.

There was a short addendum conversation about the entry-level skill problems with some attempt at general definitions.

Minutes by Anne J. Russ

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Vernon Beuke
Research Associate
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Ithaca, NY 14853

Dear ISSOE Steering Committee Member:

We had a very stimulating and productive ISSOE Steering Committee Meeting on January 29 and 30, 1979 at Ithaca, New York. We appreciated the active involvement by each member.

Your guidance and direction provided valuable inputs into the process of developing a responsive ISSOE Competency-Based Student Reporting System and providing a process for developing Individualized Educational Plans for students of occupational education in New York State.

We shall proceed with the field testing phase of the ISSOE Student Reporting System and the development of the IEP and Guidance project. Directions and suggestions will be incorporated in our strategies for conducting these two efforts as part of the continuing Research and Development efforts for implementing ISSOE in New York State. (See attached minutes)

Thanks again for your participation. It is a pleasure to work with such a great group.

Sincerely,

James A. Dunn Vernon L. Beuke Al R. Edsall

Enc. Minutes of the meeting attached.

AE:ls

APPENDIX C

ISSOE STEERING COMMITTEE MEETING MINUTES

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University

Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for
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Telephone 607-256-6515

December 21, 1978

MEMO OF RECORD

TO: Al Edsall, Vern Beuke, Jim Dunn

Subject: First ISSOE Coordination Meeting

Including notes from meeting with Doug Adamson, Peter Cooke, Al Robertson, and Howard Alvir at the Turf Inn.

1. We will try to have bi-weekly meetings and involve Bill Kyros if appropriate.
2. We have settled on automotive and business (if possible) as the two areas to concentrate on for student reporting and IEP programs.
3. We will do approximately 6 automotive occupations and approximately 12 business occupations.
4. The occupations should show career ladder possibilities, both should have low level occupations that might be reasonably handled by a slow-learner, specialized jobs that might be handled by the physically handicapped, and if possible, intersecting jobs that might provide for cross-program training such as auto parts clerk, which wouldhave some business related module training as well.
5. We also want to look at the possibility of similar skills across DOT areas so that we can have job cross-over planning, i.e. we can exchange credit from one program or one module to a module in another program. We also want to look for the same skills that are general across several programs so that we can have easy identification of common skills.
6. We want to look at the possibility of encouraging a student to "challenge a module" and demonstrate his or her proficiency without having to work through the module.

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December 21, 1978

TO: Vern Beuke, Jim Dunn

SUBJECT: ISSOE Coordination Memo #2

1. Vern will contact guidance personnel in SED to coordinate the ISSOE-IEP with state and federal requirements for IEP's in general.

2. We want the IEP to be pre-printed in a fairly attractive format on perhaps carbon paper so that the student has his own personal work copy and the school has a file copy.

3. The IEP will be the driver for educational planning for the student. It should have some provision for parental endorsement of the plan. Perhaps the easiest way to do this would be to counsel on specific DOT preparation and the career ladder the student wants. Student profile reporting then can take place quarterly or be timed for just before the end of each semester, or on teacher demand, or on DOT job completion.

4. When a student has completed successfully all objectives for a particular DOT he should get a certificate of completion and DOT competency. Thus he will accumulate DOT completion certificates throughout the year.

5. The master student profile in addition to simply listing all of the competencies mastered by the student that year, should also, at the bottom, list all of the DOT jobs which the student is qualified for and also the DOT's for which the student is almost qualified.

6. Student profile ought to indicate competency as pass/fail. Then in order to facilitate grading, or further student counseling, the passing notation may be further qualified with the adjectives passed/outstanding; passed/strong; passed/entry level; and passed/OJT.

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December 21, 1978

TO: Vern Beuke

FROM: J.A. Dunn

SUBJECT: Ramada Conversations - New Project Suggestions; Secondary

We should plan to develop proposals on at least 2, 4, 5 & 6. Al will concentrate on 8 & 9. The three of us probably should work on #1 together. Proposals 3 & 7 are "open". We should also consider reactivating last year's Effectiveness of Career Choice proposal as well.

1. Develop course resource guide to assist ISSOE instructor in selecting materials and/or sections of materials to use in actually teaching the competencies suggested on the ISSOE modules. This could tie into the various federal projects aimed at identifying DOD vocational training materials appropriate for school use. (Al, Jim, Vern)

2. Field test the IEP procedures that we develop. It would be especially important to also include in this field test the degree to which recommended resource guides are in fact used. (Jim, Vern)

3. Articulation of ISSOE with post-secondary. The Cobleskill project might be a very appropriate project for this. At least we should reactivate our proposal of last year. (open)

4. We may want to do a cost comparison study to compare costs between traditional programs and individualized ISSOE programs. It may be also that we will want to demonstrate the possibility of co-mingling a couple of programs at a BOCES so that common skills can be developed once for both programs and thus reduce training time and show increased costs through some shared instruction. (Vern)

5. We may want to do an ISSOE impact study not unlike the impact study for AVEA. (Jim)

6. A study of procedures to encourage advanced placement in ISSOE occupational education where the student challenges the competencies and gets certificates of competencies. (Vern, Jim)

7. A study of student recruitment and student satisfaction with ISSOE type programs. (open)

8. A study of co-op ed placement components, job skills, application experience. This would be a study of the placement of ISSOE students after their ISSOE training.

9. The placement study could be expanded into a program to train employers into how to use ISSOE graduates wisely and how to interpret a student's profile produced by the student reporting system.

JAD:bf

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January 5, 1979

TO: D. Adamson, V. Beuke, P. Cooke, J. Dunn and A. Edsall
K. DeCerce

SUBJECT: ISSOE COORDINATION MEMO #3

1. Vern has been in contact with SED personnel in special education and in guidance regarding state and federal IEP regulations and will meet with them next week in Albany.

2. Several alternative formats for the IEP were discussed and tentative format work will start shortly in order to have a variety of samples to use in discussing various options with the Advisory Committee, and others.

3. The IEP will be an attractive pre-printed form which can then have an instructional program filled in for each individual student. State and federal requirements for IEP generation will be listed on the back of each form. This will enable an instructor to use the form should and IEP need to be generated for a special student.

4. The IEP generation system is summarized on the attached flow-chart.

5. The IEP procedure will also provide the vehicle for Student Reporting System data collection from the field. The close inter-relationship between the Individual Educational Plan subsystem of ISSOE with the Student Reporting System is clearly indicated in the flow-chart.

6. A similar flow-chart will be generated at our next ISSOE coordination meeting for the Student Reporting System. The necessary Student Reporting System forms will also be identified and tentatively drafted at that time.

7. The materials above will then form the basis for our first ISSOE Advisory Committee meeting.

8. Perhaps a working session with SED personnel can be conducted after the Director's Conference in Albany on Tuesday, February 6, 1979.

New York State College of Agriculture and Life Sciences
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Cornell University

INSTITUTE FOR OCCUPATIONAL EDUCATION

ISSOE STEERING COMMITTEE

Dinner Meeting : Topics of Discussion

1. How do you define "individualization" within an occupational education classroom?

   a. informal self-directed learning
   b. diagnostic prescriptive programming
   c. meeting special learner needs
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   f. other

2. If it were mandated that all occupational programs were to become "fully individualized," what changes would have to be made to existing programs?

   a. smaller classes
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3. What impact has or will "mainstreaming" have on the occupational educator?

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   c. closer coordination with other teachers/depts.
   d. impossible to say in advance
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4. What guidance function do occupational educators serve?

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   b. planning and decision-making
   c. values clarification
   d. mentoring
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I S S O E

Steering Committee Meeting

January 29 and 30, 1979

Cornell University, Ithaca, New York

Outcomes:

A. Proceed with field test phase of the Student Reporting System for ISSOE.

- Teacher-student needs to be the major concern this year.
- Survey teachers in test sites to determine their needs.
- Act upon recommendations and concerns voiced by Steering Committee members at the meeting. (Review minutes)

B. Investigate methods for enabling teachers to individualize ISSOE programs.

- In-class career planning by students and teachers.
- Acknowledge institutional restraints on individualization.
- Collect and organize information on individual students.
- Work with teachers, counselors and administrators to develop methods and materials.

CORNELL INSTITUTE FOR OCCUPATIONAL EDUCATION

MINUTES OF ISSOE EXECUTIVE COMMITTEE MEETING January 29 and 30, 1979
Sheraton Inn, Ithaca, New York

I. Introduction and details - Al Edsall

II. Update, ISSOE system - Doug T. Adamson

- A. Educator identified Competencies
- B. Validation with business and industry
- C. Student reporting system feedback* *CIOE concern
- D. Futures
  1. Resources necessary to teach these competencies
  2. Methods of teaching these competencies

III. State of ISSOE - Peter Cooke

- A. Tendency to focus on "product" should attempt to focus on "process"
  1. Individual class planning
  2. Over-all institutional planning with roles for the users of the system. (Handout to participants)

IV. ISSOE at Cornell - Jim Dunn

- A. (Handouts of charts) with ISSOE components, ISSOE participants, flow chart for planning on reporting system for ISSOE students
- B. Cornell's commitment, 1978-79 validation of the student reporting system with implications for dissemination (flow chart) along with assisting in the staff development component
- C. Discussed the problems of using outcomes as an evaluative technique for ISSOE.
  1. Options for Reporting:
     - a. Chart of competencies (Profile)
     - b. DOT Chart with competencies for that occupation (Profile)
     - c. Employability Profile

V. Dissemination of ISSOE report from last year - Al Edsall

Handed out and discussed summary report of the 1977-78 ISSOE Student Report Planning Year. Have since updated reporting outputs.

VI. Projects underway - Vern Beuke

- A. The Dissemination Effort
  1. Review of the Literature
  2. Compilation of the papers of consultants - "Implementing Change in Vocational Education"
  3. Specifications of models and implementation strategies in vocational education - Discussion of variables in implementing innovative programs
- B. Guidance and IEP Project - How you make the program relevent to the needs of the child is the Question?
  1. Methods and materials for occupational education
  2. Guidance roles for ISSOE:

a. Helping students to develop competencies
b. psycho-social adjustment
c. decision-making
d. remedial services

VII. Status Report - Nassau BOCES ISSOE Implementation - Duke Zuzio

A. Modularized the automotive shop curriculum.

1. Meeting the needs of all students

B. Have a media center for audio-tutorial purposes of instruction.
C. Had an orientation session for students involved in ISSOE on. exactly what it is.
D. Daily report forms on every student are used.
E. Use a skills achievement book with copy for every student.
F. Creation of folders:

1. Competency folder with the daily report
2. Personal evaluation folder (affective domain??)
3. Achievement books (grades?)

G. Needs to be addressed

1. Clarify grading system - perhaps computer grading - teachers are looking for simplified grading procedures.
2. Entry-level skills for the first years employment - Employers expect too much. They have gone out with their students to employers to explain what the competencies mean. ISSOE can be frustrating, but has been very rewarding particularly with special needs students. If ISSOE is to be judged on employability, than the special needs youngster (and their capabilities) must be taken into account.
3. Paper work .... teachers resent this.
4. How do you evaluate performance on a one-to-one basis? (process or end product?)

VIII. ISSOE Progress Charts and Reporting - Joe Carr - Monroe BOCES #1

A. Daily report form (handout)
B. Progress Chart - very positive about how ISSOE has enabling teachers to chart student progress
C. Evaluation-Competency Report (handout) goes to guidance, teacher, parents, co-op ed for job placement ... questioned how these can be put in the computer ... advocated simplicity in report forms since validation will, inevitably, come from teachers.

VIX. ISSOE Student Reporting System Field Test - 1978-79 - Al Edsall

Presented and discussed proposed class and student reporting formats:

A. Class Progress Chart - using ISSOE Competencies
B. ISSOE Student Mastery Profile:

1. DOT Job Titles Matched to ISSOE Program
2. ISSOE Program Competencies matched to DOT Job Titles

END OF FORMAL SESSION NOTES:

NOTES: Comments made by the group during the above session.

P. Cooke emphasized, along with D. Adamson, the need to keep in mind that the system is designed for teachers for use with students in designated local regions and that we must "fit things that are needed into a local framework".

J. Rose, "As a Labor Exchange we(State Employment Service) feel we should be some place in between the school and the employer in many of the placement situations. Also, our record keeping systems are all numerically based because of DOT format and we would prefer to see DOT numbers with all DOT Titles."

D. Adamson commented on home-economics and other "unpaid work" as needing competency-based programs. Work is underway in N.Y. in these areas.

C. Benenati asked about delivery systems for assessment...say an audio-tutorial system for a shop is a good assist.

J. Dunn (answer)... Some schools do a great deal with individualization. Other districts may do little or nothing. We're talking about a system for ISSOE that will test competencies without allowing the program to be evaluated only at the end - without regard to individualization, we need a front-end component of the "game plan".

C. Benenati was concerned that the feedback system not further tax the classroom instructor and that we devise a system with simplified input that can be machine-sorted for various audiences (i.e.-parents, educators, employers,etc.)

J. Carr agreed with Vern's comments that IEP should not just be for the special needs students and that cutting down the number and the range, depending on the ability of the students, is a good idea.

H. Dworetzky asked about the complexity of the competency evaluation sheet.

C. Benenati raised the possibility of the use of peers (i.e.-foreman) to help in evaluation. D. Zuzio said this had met with limited success. The final evaluation must come from the instructor.

D. Adamson pointed out that (1) it depends on the program area whether process or product can be evaluated and (2) hierarchical skills may enable us to evaluate at a different level with other skills subsumed under larger categories of competencies.

A. Edsall, during the program design discussion, pointed out that the problem with the employability profile has been to get the employer to understand that these are entry-level competencies..."What can the student do and at what level?"

J. Rosa wants figures on ISSOE and said, "DOT job descriptions talk about jobs and not people. There really is no inconsistency as both employers and placement staff realize, or should realize, that students coming from training programs are not as adept as workers with years of experience. We use a special entry to designate entry workers so they are identified as such.

C. Benenati, "Is the DOT information the necessary format for the ISSOE objectives?

J. Dunn, "It allows you to give feedback in a meaningful way - makes the range less formidable to the student and to the employer. Keep in mind, after we identify the competencies for entry-level jobs there will always be someone who thinks we should have one more."

R. Schneider, "Do the Mastery Profiles lead employers down a false path? Perhaps we should have a note on the bottom which indicates that there is more information at the school.

There was much discussion about the specific format for the field test, i.e.:

1. Can paid employment be identified?
2. Accessing secondary levels of information? Accessibility and utilization - items, speed and rate of mastery may be more helpful.
3. Are we trying to get too much information to individuals receiving the information? (parents, guidance counselors, etc.) What is needed is one input from teachers with selective output. A recent survey (by Rudy's BOCES?) indicated that employers are less interested in skills, psycho-motor, etc. than other, less measurable areas (i.e. attendance, neatness, promptness, attitude) (Is that ever a Pandora's Box!)

G. Ferris said that teachers and employers don't understand DOT and that the needs of employers at each local level are necessary input.

D. Adamson summarizing,

1. CIOE better check out the users to see if this is information they really want.
2. We need a reporting system that provides feedback fast. Pick a very typical situation that guarantees feedback...doesn't matter whether it is positive or negative. He was concerned about language in reporting to target groups. How are employers viewing employability profiles? What are their needs? The systems must interact.

NOTES: Morning Session - January 30, 1979, Sheraton Inn, Ithaca, New York

I. Review of the ISSOE System - Al Edsall

A. Needs

1. Approval for field-testing strategies.
2. Proper audience for field test-labor department, teachers, administrators, students, employers.
3. Review of process for field test.
4. IEP and guidance phase - Needs - Vern
5. DOT & ISSOE match Tables.

END OF NOTES ON FORMAL SESSION:

Comments made during the discussion period:

Carl, "The system has to provide information for a number of publics. The form needs to bear this in mind plus it should be a one-shot simple deal for teachers. The instructions should be all inclusive and the machine should break down the information. (2) We need questions that identify entry-level skills.

Ed, "We need a system that will link with the labor department. Will one document serve these five publics?

Jim, "We propose to use one document to educate our various publics to look at, to critique - We propose to use the DOT for this format.

Ed,"What about parents?"

Answer, "If it is a priority in a region there should be a way to involve them.

Doug, "The issue is will one form serve the needs of all the publics?" Is there a way to come up with a document that informs parents? "We don't have to design the whole system in one year. We need to establish priorities and instructional support for professional staff is our first priority.

Carl, "Parents and employers want the same information. Some of the data may serve more than one public. The key is that we don't overload the teachers and we serve the various publics.

Al,"The issue is: Can the DOT's serve the ISSOE system?"

Doug, "How do you 'massage' the same data for different publics?"

Ed, "Do we know the needs of the various publics? Should we survey the various publics and then give them the kind of information they want?"

Doug, "Teachers and guidance people may need one kind of information (specific) and others may need more general information.

Ed, "Could regional coordinators help with this?"

Jim, "We've received nothing but good feedback on the involved form. I think the new form is adequate." (Monroe BOCES)

Peter, "Is the form to be used as a monitor or as an implement to action? One thing we need is that the information is geared toward decision making and/or action."

Dick, "We're looking for assessment of competency right now. The problem has been how we translate these competencies into a percentage or grade for the home school."

SUMMARIZING COMMENT: The major issue I was hearing here is: will what meets the needs of teacher, administrator, counselors, for grades, evaluation, etc. and will it dovetail with the needs of employers, parents, and others. We need to know what these constituencies want and need. Do we know that?

Duke, "The regions need an instrument that will enable them to gather information with a one-shot deal. (That came through loud and clear.) Can we develop a package for each coordinator to use as a sample format and keep in sufficient detail but keep it simple? (cute trick!) Can we come up with such a form for the field?"

Al, "The orientation and information packages can contain some of these options."

Carl, "There may, sometime in the future, be a data band for teachers so they can see how "they measure up".

Doug, "I can't envision the 'norm' system again. This is either the student has learned or not, 'go or no go'. The purpose of this system is to help instructors improve their strategies. What we're talking about is using the same information but "arranged differently."

MAJOR QUESTIONS:

1. Do we know what kinds of information the various publics need?
2. Can we get the information with one form?
3. Can we devise methods (programs) that provide varying outputs?

Jim, "We need to plan for (1) how to support instructors (2) effective functioning record system emphasizing, what are the important things to know about students (3) where to start in the field, collecting samples - what's feasible?

Doug, "This advisory group has moved from a 'steering'function to concerns. CIOE should concentrate on student-teacher needs this year. What is needed developmentally, is to think of designs for administrators, employers, etc. Cornell will work in specific locations with specific groups to locate their needs. This committee has raised concerns and given direction. Now we need to move into action in the field. I recommend three locations."

Harold, "Would like to see various models identified and duplicated so that teachers can see programs."

Jim, "There are two questions being discussed: How do you implement change in reporting systems and how do you develop a new reporting system? What are the needs?

Mike: "When looking for test sites look at existing systems (Rochester, Broome-Tioga BOCES, Onondaga BOCES, and Oswego were mentioned as test sites) and utilize students (recent graduates and ISSOE students) in devising the system."

The suggestion was made to look at a small school, new to ISSOE with a limited reporting system. We need to not oversell the system and keep in mind that the local systems will be doing the vast majority of the work.

FOCUS FOR CIOE THIS YEAR - Jim Dunn

1. Teacher - student needs.
2. Three districts with instructors, administrators and ISSOE regional coordinator.
3. Continue to consult with the group.
4. Two areas of tasks:
   a. Student reporting systems operational on a prototype basis
   b. Developmental work on employers, administrators - with expansion to other areas from business, automotive.

There was a short addendum conversation about the entry-level skill problems with some attempt at general definitions.

Minutes by Anne J. Russ

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Dear ISSOE Steering Committee Member:

We had a very stimulating and productive ISSOE Steering Committee Meeting on January 29 and 30, 1979 at Ithaca, New York. We appreciated the active involvement by each member.

Your guidance and direction provided valuable inputs into the process of developing a responsive ISSOE Competency-Based Student Reporting System and providing a process for developing Individualized Educational Plans for students of occupational education in New York State.

We shall proceed with the field testing phase of the ISSOE Student Reporting System and the development of the IEP and Guidance project. Directions and suggestions will be incorporated in our strategies for conducting these two efforts as part of the continuing Research and Development efforts for implementing ISSOE in New York State. (See attached minutes)

Thanks again for your participation. It is a pleasure to work with such a great group.

Sincerely,

James A. Dunn | Vernon L. Beuke | Al R. Edsall

Enc. Minutes of the meeting attached.

AE:ls

Minutes of the
Cornell ISSOE Coordination Committee Meeting

DATE: March 7, 1979

TIME: 9:00 a.m.

PLACE: Room 104 Stone Hall

PRESENT: James A. Dunn, Vernon Beuke, Al Edsall, Bill Kyros

RECORDER: Vernon Beuke

This meeting continued the joint planning of events of the Student Reporting System project and the ISSOE Guidance/IEP project. The major portion of meeting dealt with assessing the present status of both projects and planning for future activities, deadlines and deliverables.

Priorities for the Guidance/IEP project include:

1) Develop the Brochure for Student Planning.

2) Finish a concise review/synthesis of the literature on systems/methods of individualization.

3) Review and revise items 1 and 2 above, and the IEP forms which were developed earlier.

Priorities for the Student Reporting project include:

1) Finalize and distribute a draft of the Field Test Plan.

2) Finalize and distribute the final Field Test Plan.

Other dates on the two projects are thought to be equally important objectives, but the priorities listed above were seen as prerequisite to achieving later project objectives. The committee reviewed subsequent activities and deadlines and the following master schedule was agreed upon by those present.

ISSOE Master Schedule (Revised 3/7/79)

Date	Guidance/IEP	Student Reporting
March 12		Draft Field Test Plan
March 17	Draft Brochure	
March 31		Final Field Test Plan
April 1	Rev/Synthesis of lit.	Train Field Test
April 6	Rev/Revise Brochure	
April 15	Materials for Teacher Orientation/training (conduct ASAP thereafter)	

Master Schedule (cont.)

April 20	Print Brochure	
April 30		Complete training
May 1-31	Field test/Collect Data	Field test/Collect Data
June 1-30	Process/Analyze Data	Process Data Distribute Reports Survey reactions Final of Tech. Report
July 1-31	Develop Student Brochure	ISSOE Committee Review
August 1-31	Prepare Teacher Guidebook Review Products of Tech. Rev. Comm. Draft of Final Project Report	Draft Final Project Report
September 1-30	Steering Committee Review/Evaluation Final Report Due	Steering Committee Review/Evaluation Final Report Due

Other issues discussed include the problem of using the same teacher population at field test sites for both projects. Possibilities include:

1) Use the same teachers.

2) Use different teachers.

3) Use some of same and some of different.

Drs. Edsall and Beuke are to resolve this problem as soon as sufficient information is available about project demands on teachers' time and other such factors to be resolved.

Dr. Beuke mentioned that he believed the guidance component to be of lesser importance to the individualization of program objectives and would devote most of this time to the latter if there were no objections. None were expressed. Additional effort will be devoted to the guidance component at a later date.

Dr. Dunn commented that the meeting was very helpful in clarifying our individual goals and activities. He proposed that we meet again in two weeks. Madeline Dean will arrange for the next meeting.

Dr. Dunn also mentioned that we should plan a reprinting of any ISSOE report/product that is in short supply. Specifically mentioned were the Student Reporting Report and the Review of Literature on Change.

There is the possibility of obtaining additional graduate student assistance, if needed. An additional secretary has been hired and will be on board within two or three weeks.

Meeting adjourned at 10:40 a.m.

MINUTES OF CORNELL ISSOE COORDINATION
COMMITTEE MEETING

DATE: March 28, 1979

TIME: 8:30 A.M.

PLACE: 7 Stone Hall

PRESENT:

James Dunn	Bill Kyros
Al Edsall	Bill Drake
Vern Beuke	Dalva Hedlund

Recorder: Vern Beuke

The major agenda item for this meeting of the coordination committee was to present the field test plan for the student reporting system for spring of 1979 and to obtain feed back from the committee members.

Al Edsall began by briefly describing the Student Reporting System project. Revised data collection instruments were then presented and discussed by the committee. The purpose of each was discussed and related to the overall student reporting system.

Bill Drake raised the question of the void in affective domain of the ISSOE employability competencies. The committee discussed the problem. Vern related the SED concern of concentrating effort on identifying and teaching skills for which employers are willing to pay the employee. Al believes that although the affective domain is omitted on the surface, the oc-ed teacher <u>is</u> definitely concerned and teaches these competencies, as well.

With respect to objectives in the affective domain, it was suggested that the guidance project could become exit and entry oriented: i.e. help students plan for their education and, at the same time, help students in documenting and organizing information about their interests, attitudes, abilities (skills), and career objectives.

The field-test of the student reporting system is to be conducted at three sites. All but one have been identified and their cooperation secured. A third site should be confirmed in the near future.

Dr. Dunn asked the group if the teachers would be able to use the information provided by the reporting system or would they simply do the work or, possibly, refuse to participate?

Dr. Drake believed there would need to be good information provided to the teachers and instructions about using the information. He further stated that they (teachers) are currently deluged with paper work.

Dr. Dunn commented that an alternative to written reports would be telephoned reports. Teachers could call (collect) in the reports and Al, or his assistant(s) could discuss the reporting process and help debug the system concomittantly.

Dr. Hedlund believes that a suitable research area is in the area of affective training. Social learning theory is a possible model for such research; i.e., the source(s) of learning attitudes, values, etc. can possibly be identified and methods of remediation or improvement in student attitudes can be developed.

Dr. Dunn asked if there is any payoff for teacher's completing the required forms. Dr. Beuke related the experience of similar system at a BOCES which had not proven successful. Bill Kyros agreed that teachers may do the work without direct payoff, but they may do it without much enthusiasm or committment.

Dr. Dunn believes the employability profile may be the secret to survival of the reporting system. Program accountability in occupational education is closely tied to student employment. Teachers who are concerned about students are also concerned about their employment.

A meeting for the month of April is to be scheduled by Madeline. The meeting was adjourned at 10:15 a.m.

CORNELL ISSOE COORDINATION COMMITTEE

MINUTES OF MEETING

DATE: 4/17/79

TIME: 8:30 a.m.

PLACE: 7 Stone Hall

PRESENT:

J. A. Dunn	Bill Kyros
Bill Drake	Al Edsall
Vernon Beuke	Bill Smith

Dr. Dunn announced a new project which may relate to the statewide ISSOE program. SED recently awarded a contract to Onondaga BOCES for work on an occupational education reporting system. This project may have ramifications for local ISSOE projects.

The committee discussed problems of implementing the ISSOE reporting/planning system. Teachers will probably resist any add-on responsibility unless they see personal or professional benefits being derived. Al Edsall stated that the major advantage of the reporting system is in management and improvement of instruction at the classroom level.

It was agreed that the guidance/IEP planning project must dovetail with student reporting system. Ways to assure this outcome were discussed.

Al Edsall related feedback on the Occupational Preparation Profile forms from Bureau chiefs in SED presented through Peter Cooke. A revision of each form is required and will be made. Although the changes will require minimal revisions to existing forms, it was thought that limiting DOT job titles to only five in each area would have negative consequences for teacher expectations. Data already received from teachers indicate that students are exceeding the competencies required by these positions and according to teacher input, are qualified for a great many DOT titles.

The committee discussed the scope of the ISSOE program curriculum. Revisions suggested by SED indicate that the curriculum may be much too broad, including competencies for which entry level employees are not expected to be competent.

The meeting was adjourned at 10:05 a.m. Madaline Dean will schedule a meeting for May.

ls

TO: V. BEUKE
W. DRAKE
A. EDSALL
D. HEDLUND
R. RICHARDS

FROM: J. A. DUNN

DATE: MAY 10, 1979

The ISSOE Coordination Meeting with Peter Cooke is scheduled for Friday, May 11 in Room 7 of Stone Hall from 9 - 12.

The purpose of the meeting is to:

1. Brief Onondaga staff
2. Review systems requirements
3. Identify problems
4. Coordinate coming activities.

The agenda will be as follows:

1. Review of the student planning-teacher reporting-student competency profiling output reporting system.
2. Review of student planning procedures.
3. Review of teacher reporting procedures.
4. Review of student profiling procedures.
5. Review of output reporting procedures.
6. Coordination of trip to Southern Westchester.
7. Lunch
8. Dissemination - Phase II
9. Instructional Materials Center visit.

JAD:mbd

5/11/79 mbd

DRAFT

Notes of ISSOE Coordination Meeting - May 11, 1979

Attendance: V. Beuke, Peter Cooke, James Dunn, A. Edsall, R. Richards, , and Madeline Dean

1. Have brief regional meetings with Regional Coordinators (go into more detail.
2. Package materials - then follow-up. Doug Adamson needs more follow-up detail.
3. Stress in Adamson's presence - Individualized Program Planning not Personalized Planning.
4. System we are designing will permit special needs (job preparation and program planning) allow flexibility for a district to use it as well.
5. Prepare work out from BOCES pre-machine pre-reporting Development of procedures for Parent/Student Planning
6. For ISSOE to be accepted we must plan for special needs students. A range of planning potentials.
7. Per Peter Cooke - At this stage it allows a process for aggregation for administrators program structure and delivery. Value open system.
8. Take a variety of IEP's and generate types of programs.
9. Should not merge IEP and IPP!
10. How much complexity can we afford?
11. How much complexity will people report?
12. Physical format of output - specially printed paper, attractive and scannable.
13. Range of options very precise levels of detail to very aggregate. May want to go back to original options.
14. Alternate physical formats for different school districts.
15. Train staff (faculty) to use computer system or develop our system to meet a variety of teacher specifications or requests.
16. Adapt to local needs! Provision for selection and choice to be made.
17. P.Cooke - Process by which we do identification of DOT's.
18. This field test is testing on a small number of DOT's with a very small amount of change over time.
19. DOT titles subject to change, prototype is being tested.

20. Student career choice system.
    Parameter of preferred planning
    Specifications of DOT's
    Confirmation of competencies
    machine system that will generate a pupil plan
    data processing format
    Take student programs and aggregate how many in one or another
21. Ask instructor to tell us how well student has done.
22. Peter Cooke- Check competency completed or grade report.
23. Major options-school district asks that grades go out. Computer might send grades back.
24. CUNY is working on testing concept. Trying to find out those that are critical out of 12 tasks you might test three.
25. Performance of X implies competency of _.
26. District may report on the objectives at all levels. Module level not on task or unit level.
27. Different schools may want different recipients. One coming in one level, one in another.
28. How fast is teacher working is pointed out by form
29. Report in and out only objectives pertaining to that student.
30. Classes that want to look at all students - limit requirements.
31. Presumably the consequences of developing a student record file-
    What jobs capable of performing?
    Competency profile
    DOT occupations
    Aggregated by class
    Aggregated by BOCES
32. System that provides for some form of planning and will result in a document.
33. End result of taking that program becomes a dosier for the student.
34. Cooke - Recognition for affective and cognitive areas.
35. Teachers are turned on/off by design of forms. Test different designs on them.
36. Make system responsive to the public. Slick forms, flow chart for administrators decision points - options open.
37. V.Beuke - Concentrate things in the field. What is being done? Problem - Planning Individual Programs.
38. P.Cooke - Student has had no prior planning prior to going to BOCES.

39. Part B takes place after student is already in the program. After student receives information. View system selection of DOT within a program. What actions can be taken for a student already in a program?
40. Planning of IPP takes place at Cornell then at the computer. Keep flexible so student can change. Detection by computer incase of student changes or shift add in new - delete old.
41. Generation may find that instructors are being very rigid. Treat all students the same regardless of ability.
42. Teachers fear computers as it shows lack on their part. Also in the administrators.
43. Make available across state.
44. Students registered in one program but functioning in muitiple programs.
45. Review status of student on total ISSOE offerings.
46. Computer point of view - tie in has to be careful whom you can handle in the ISSOE system.
47. OERS program dropouts go backto school. Logical place to aggregate moving between schools and programs.
48. System cannot handle transitents across BOCES.
49. Migrant record transter systems (MRTS) allows student record to be at specific location when student arrives. How do they do it? How do they identify each student? Look into this!!
50. Build as much flexibility into the system as possible. This is an area where OERS may have some of the data. Yes, they do.
51. Computer could generate a pre-printed form.
52. Instructor tasks to respond to computer class roster.
53. Teacher-Parent-Student confirm additional information on the front of Form B and submit the completed form back to computer for completion of back of Form B which is then distribtued back to the teachers.
54. There is a general lack of communication between the home school and BOCES instructor. In which case, Form A would go out only after pre-printed Form B was received.
55. Ask about motivation attitude. This is a sensitive area Planning will be by guess and by gosh.
56. Buckley amendment frightenes people.
57. Student Reporting System,. P.Cooke - give attention to discussion of options and alternatives. Administrators will confront sub-flows to be captured.

58. Proliferation of DOT's within a general area.
59. Show progress across a master sheet is discouraging. limited information,
60. Adamson wishes - report only what has been accomplished. Do not show what has not been
61. How much reporting? Completly mastered or partly mastered.
62. Options available - Only report accomplishments. Report all but not on the same paper. Generate a report precisely.
63. Reporting non-completes is a safety check on the teacher.
64. Identify those things a person had before coming into the program.
65. Issues relating to program. Get into a pre-test.
66. Make a decision rule 20% or more do not see report, if less than 20% we do not report.
67. Objectives being field tested subject to change.
68. Level of competency is simply the mean of competency an unresolved question is that do not all but one objective.
69. Every district can add additional requirements.
70. Adamson wishes we give thought to range of jobs.
71. Move away from proliferation of courses.
72. Can have 5 different DOT'numbers
73. Issue not addressed - done on an ad hoc basis.
74. Discuss this with all the chiefs. variation in reporting.
75. How are issue areas define

Points to be made at Westchester

1. IEP doesn't meet federal guidelines for IEP's.
2. How do you go about generating a career aspiration for the students?
3. How basic OCCUPATIONAL Education is merged with Occupational Education.
4. Need master mailing list of all ISSOE participants.

APPENDIX D

INDIVIDUAL PROGRAM PLANNING
INFORMATION FORM

STUDENT_____

DATE_____ SCHOOL_____

(1) Indicate whether you would want and/or expect to become employed in each of the jobs listed below after graduation from high school. Mark the appropriate response.

Job Title	I Would Like	I Would Consider	I Would Dislike
Receptionist			
Stock Clerk			
File Clerk			
Clerk - General			
Clerk Typist			

(2) Five years from now, I would like to be employed as:

First choice:_____
(Job title or kind of work)

Second choice:_____
(Job title or kind of work)

Third choice:_____
(Job title or kind of work)

(3) Briefly describe your experience in working in an office or business. Include paid and unpaid work.

_____

_____

_____

_____

(4) Who helped you select your job goal? Check all those that apply.

Myself_____ My counselor_____
My father_____ My friends_____
My mother_____ Others (please specify)
My teacher_____ _____

(5) Indicate how you think your grades compare to your classmates in each subject below:

Subject	Above Ave.	Ave.	Below Ave.
Reading & Lang. Arts			
Mathmatics			
Science			
Social Studies			

TEACHER PLANNING WORKSHEET

Completion of this worksheet will facilitate the preparation of an Individual Program Plan (IPP) for this student. Much of the information required for this plan has been provided by the student on page one. Your professional judgment of the adequacy and accuracy of the student information is critical to development of a successful plan.

(1) This student has selected an occupational career. _____ Yes _____ No*

(2) I concur with the student's choice. _____ Yes _____ No

(3) The student probably has the ability to be successful in this course of study. _____ Yes _____ No

(4) In addition to the job choices selected by the student, I recommend he/she prepare for the following job titles.

_____ _____
(Title or Area) (Title or Area)

_____ _____
(Title or Area) (Title or Area)

(5) List any additional student services you would recommend for this student.

Counseling _____ Academic tutoring in:
Career Information_____ Reading_____
Other (Specify)_____ Math _____
_____ Other (specify)_____
_____ _____

(6) An IPP for a period of _____ weeks should be prepared for this student to reflect his/her goals and abilities. The plan should be reviewed on _____.

(7) Comments:

* If student has not selected a specific job goal, do you recommend a general course of study in business office?

_____ Yes _____ No

APPENDIX E

CAREER COMMENTARY, Vol. IX

Career Commentary

Cornell Institute for Occupational Education Vol. IX

ISSOE — One Year of Implementation

by Duke Zuzio
Occupational Education Teacher

(During 1976-77 Mr. Zuzio was a Curriculum Specialist with the Institute assigned to the ISSOE project. As part of his field liaison duties, he made numerous visits to BOCES centers and constituent school districts and participated in many meetings and seminars for the purpose of presenting the philosophies and concepts of the ISSOE project and curriculum. Duke is presently ISSOE Regional Coordinator, Region 1-E, Suffolk BOCES #2.

In approaching the implementation of ISSOE, I asked myself three questions:

1) What are the areas I must consider for solutionizing?
2) What concepts other than ISSOE's must I consider for implementation?
3) How do I utilize the "Instructional Management System" for implementation?

The "State of the Arts" or areas to consider for solutionizing were many. The student population was in constant flux. Students move from program to program within a school building, as well as from school to school within districts and regions throughout New York State. The learning capabilities and levels of ability of each student had to be considered. There were 55 candidates involved in the program and I feel it safe to say that there were 55 different and unique levels of ability in the classroom.

The ISSOE concepts of a standardized curriculum format with major objectives has the potential for solving the problems of student mobility by making provisions for high student mobility about the state while not repeating educational experiences in which competency had already been achieved.

The problem of diverse levels of learning capabilities and abilities was addressed by assigning each student appropriate tasks from the ISSOE: Major Objectives, thus allowing me the opportunity to "tailor make" each student's course of study to fit his/her level of ability. One problem with conducting individualized learning is that it requires a great deal of energy and flexibility in the teacher, especially those with a large class size. There is just so much of a person that can be allocated to each student during the learning process. There are two possible solutions to help resolve this dilemma: smaller class size, or teacher aides for those with large groups.

The flexibility of instruction and the "menu" concept of ISSOE helped to resolve the concerns of mainstreaming and Public Law 94-142. In these two areas, the ability to be flexible with my instructional sequence allowed me to "pick and choose" a "menu" (instructional path or sequence) which eventually became a "Personalized Program Selection" process.

The intent of the "Personalized Program Selection" for the occupational education student is very similar to the "Individual Education Program" (IEP) required by PL-94-142. Each student had a specialized course of study to fit his/her needs regardless of identified learning difficulties. The personalized student programs were highly motivating for students and presented no problems at all in the "Instructional Management System".

The documenting of students' daily and cumulative progress (recordkeeping), was another area of concern. The ISSOE concept of reporting competencies was utilized. A "Student Daily Progress" report sheet was developed which reflected the student's daily progress from Monday through Friday. The six columns it contained were the days and dates of the week, the ISSOE task and task code numbers, two columns for time on and off the jobs assigned, and a grading column. The students filled out these progress sheets daily with the required information and returned them to me at the end of each day. I then recorded their daily score on a scale from 6 (minimal standard) to 10 (highest standard) and averaged it out on Friday, the end of a weekly marking period. Weekly scores and progress were recorded on a cumulative progress chart to show all students' progress. The emerging ISSOE student reporting system can easily accept these records and produce a student's quarterly report card grades and the competencies achieved.

The problems arising from implementing this phase of the management system were the time needed to evaluate each student with performance-based criteria and recording this information to the daily and cumulative progress charts. The utilization of a teacher aide for record-keeping may help alleviate this situation.

One of the most interesting and amusing aspects of the implementation process was the students' reaction to the "no failure" concept of ISSOE. During an orientation to ISSOE on September 8, 1977, the students expressed amazement and sometimes "shock" that they could not fail the program if they performed in the shop and had good attendance. They were told that failure was possible from poor attendance, an administrative edict, or by absolutely non-performance in the

(cont. back cover)

Individualizing the ISSOE Program

by Vernon Beuke

Individualization is one of the "catch-words" currently in vogue. It is a bit of jargon from the educators' lexicon that means something to everybody. However, there is little agreement on its precise, operational definition.

In past practice, two general approaches have been advocated by which individualization can be implemented. These have been termed "informal learner directed" and "diagnostic prescriptive." Informal learner directed education has been associated with the open classroom concept as well as the teacher-as-resource-person concept. It means that the learner selects both the goals and the course content to the fullest extent possible within the resources of the school. The second approach is based on elaborate student assessment techniques, technologically advanced instruction techniques, and adherence to prescribed course assignments. True, both can be defined as "individualization" but in philosophy and practice, they are poles apart.

A third alternative exists, however. It is possible to integrate these two strategies in a single classroom. Indeed, occupational educators have generally preferred an open or informal classroom atmosphere coupled with a business-like attitude for learner and teacher alike. This attitude would appear conducive to the development of individualized occupational programs based on student characteristics, the requirements of the occupation, specific objectives, modularized curricula, and teacher judgment.

While acknowledging the need for extensive work in this area, there are two prerequisites for effective classroom individualization. The first is the nurturance of a clinical attitude among teachers. The second is the development of mechanisms that make true individualization possible.

Essentially, the clinical attitude is a questioning attitude. Teachers who possess this questioning attitude automatically *inquire* about learners through observation, discussion and reading. They formulate hypotheses about causes and effects and gather data to test those hypotheses. They substitute documentation for supposition. The clinical attitude reflects the desire to optimize each student's learning by using methods and materials matched to his or her specific and unique learning characteristics.

The second prerequisite to individualization has to do with classroom management and organization. Teachers are *human!* They have a limited number of hours per day to work. Developing and implementing tailor made programs for all students is simply not feasible for most teachers, given existing technology.

It is at this point where the ISSOE Guidance and IEP Project can make a contribution to the field. It has two major goals.

- To develop mechanisms for the preparation of individualized education plans based on career choice and ISSOE objectives; and,
- To provide the means for rational career choice and timely review of past choices.

These two components of the ISSOE program may, in the long run, be crucial to the utility and survival of the ISSOE System. Indeed, teachers utilizing ISSOE will well be at the forefront of the national trend toward individualizing education. By combining existing ISSOE materials (i.e., modularized, performance-based curricula) with IEP's based on career goals and job demands, individualized occupational education—the third alternative discussed above—can become a reality.

Reading Around

A monthly Department of Labor publication, "Occupations in Demand", summarizes occupations for which large numbers of openings were listed with public employment service job banks each month. Among the "hard-to-fill occupations" listed in the Spring/Summer 1978 Extra Edition #2 were lathe metalworking, metal machinery, toolmaking, nursing (in NYC), and medical support occupations. The data are national in scope but notations are made to major cities in New York which had a significant number of openings; i.e. survey worker in Syracuse, bank teller in White Plains, and stenographer in Albany and New York City. For further information write to Office of Technical Support, USES, Employment and Training Administration, USDOL, Washington, DC 20213.

ISSOE Student Reporting and Validation

by Al Edsall

CIOE is continuing research and developmental activities in cooperation with State Ed. Dept. in the development and expansion of ISSOE. Development of a competency-based student reporting system and a validation process for ISSOE Major Objectives (competencies or tasks) are nearing completion.

Development of a statewide competency-based student reporting system is another innovation for ISSOE. A national survey indicated that no state currently has such a system in operation and many respondents requested information regarding the New York State system.

A steering committee for the ISSOE effort at CIOE is assisting in the development of the student reporting system. This committee is composed of representatives of the Division of Occupational Education—NYSED, New York Department of Labor, local employers, teachers, ISSOE Regional Coordinators, Directors of Occupational Education, Local School Administrators—BOCES and Comprehensive, Guidance and Placement personnel, Regional Computer Center and Higher Education Institutions. The committee is reviewing suggested formats and reporting procedures with the goal of finding consensus on a system to be field tested during 1978-79.

ISSOE curriculum has been designed to specify tasks performed by employees. These tasks (major objectives or major competencies) were originally derived from occupational analyses. The skills identified in the analyses were grouped as major objectives to provide a more meaningful and manageable unit. The next step requires a validation process to determine if these major objectives are realistic tasks at the work place. Other concerns of validation: 1) which tasks are needed by entry level employees; 2) are these competencies uniform statewide; and 3) are some competencies unique to certain regions.

Regional ISSOE coordinators conducted (mainly through existing advisory committees) regional validations in the Auto Mechanics and Office Occupations areas to test the system. Data are being processed at CIOE and results will be available soon.

Congratulations to Fulton-Montgomery BOCES and Community College for being recognized for their exemplary articulation efforts by an AVA/AACJC Joint Study Team. Read about it in the April 1978 issue of the AVA Journal (or the April 1977 issue of CAREER COMMENTARY).

ISSOE Update

By: *Peter Cooke, Associate*
Kenneth J. DeCerce, Associate
New York State Education Department
Division of Occupational Education

Since the Instructional Support System for Occupational Education (ISSOE) was reported in *Career Commentary* nearly two years ago, much progress has been made. The intervening period has seen elements of both constancy and change. New York's approach to competency based education has continued the basic principles on which the ISSOE design was originally based. These principles included a commitment to teacher generated, modularized, competency-based instructional objectives in occupational education programs. The promise that the skills which students learn in school should be the competencies required for entry-level employment has continued as a basic principle. Student performance is evaluated by competency measures, which also generate employability profiles and monitor student progress toward specific work skills.

The most obvious changes during the last two years have occurred in the number of participants in ISSOE. During 1977-78, nearly 800 teachers in 8 program areas participated in 11 of the 13 occupational planning regions of New York. Teachers from the 5 big cities, 34 BOCES and 91 local school districts were assisted on a regional basis by 14 Regional Coordinators, who were employed by a local agency. Three teacher education institutions, New York University, the State University College of Technology at Utica/Rome and the State University College at Buffalo, provided support and assistance at the regional level. They are also assuming responsibility for the 1978 summer workshop, which will introduce ISSOE to teachers in three new program areas. The Cornell Institute for Occupational Education (CIOE) and the City University of New York's Institute for Research and Development in Occupational Education (IRDOE), have shifted their focus from direct operations to research priorities related to the overall development of ISSOE.

Numerous units in the State Education Department have shared responsibility for different aspects of ISSOE. The Division of Occupational Instruction has provided coordination for ISSOE, with the instructional bureaus providing both content recommendations and specialized field support. The Bureau of Occupational Curriculum has served as the Clearinghouse to identify curricular concerns and synthesize materials developed in the individual regions. The Division of Occupational Education Supervision has provided program and financial support through grants and contacts, and the Planning Division has identified regional and statewide supportive employment data. The Bureau for Occupational Education Research has assisted in management evaluation, and Grants Administration has supported in-service activities.

Recent Publications Available from CIOE

A Review of the Change Literature with Implications for ISSOE Dissemination, by Vernon Beuke and Steven Farrar

The Identification of Factors Associated with Sex-Role Stereotyping in Occupational Education: Phase I, by Mary Diederich Ott

Implementing Change in Occupational Education: A Compendium of Papers, by Vernon Beuke, Steven Farrar, and Kip Ault

Sex-Role Stereotyping in Occupational Education: A Selected Bibliography for Educators, by Ann J. Russ

ISSOE: Instructional Support System for Occupational Education; Final Report, by Al Edsall

The ISSOE process for developing materials in new program areas has been established on a two year cycle. During the summer, teachers from those regions that will develop a new program attend a two week workshop during which they become familiar with the ISSOE system. During this summer, three new program areas Electronics, Graphics and Electrical Trades will be developed. These priorities were selected by the occupational education administrators across the state. At the summer workshop, the teachers develop a preliminary program content outline and begin to prepare instructional modules. This material provides the basis for complete development work carried out in the regions during the subsequent school year. In the fall, Regional Coordinators meet with groups of teachers in the new program areas as well as other program areas selected by occupational education administrators in the region. At the end of the school year, materials from all the regions across the state are combined to provide a complete composite of new program materials. During the following school year, these materials are reviewed, implemented in classes, critiqued and revised by a new group of teachers. Validation is carried out by regional business and industry groups to guarantee that the occupational competencies of the program are those required for entry-level employment.

During this initial two year cycle, teachers provide continuous development, revision and refinement of the materials. While the ISSOE process to provide competency based materials has worked well, occupational education administrators and teachers have requested that additional programs be developed more rapidly. In order to respond to this demand, catalogs developed by the Vocational-Technical Consortium of States (V-TECS) will be integrated into the ISSOE process. During the coming fall, 11 new programs will be made available through V-TECS across the state. The intent is to combine the products of the V-TECS system with the ISSOE development process. Using the strengths of these two systems, the state hopes to maintain high levels of teacher involvement and commitment, and provide high quality competency-based materials.

From the experience which has been gained to date, it is recognized that various additions, improvements and continuing revisions are necessary in the ISSOE process. The student reporting system is a major component of the ISSOE system still under development. Teachers and administrators need systematic ways to record and report student progress, review program effectiveness and inform employers of student competencies. The CIOE is actively involved in this major effort.

Criterion-referenced measures have been developed to determine whether a student has mastered each particular work competency. Development of these measures has presented difficulties for both V-TECS and ISSOE. Support for improving the criterion-referenced measures is being provided by both IRDOE and the State Education Department.

As the ISSOE materials are implemented, teachers have become aware of the great potential for individualizing student instruction. Teachers have begun to respond to this opportunity by revising their own teaching styles. In order to assist teachers develop their interests in individualized instruction, Regional Coordinators have provided in-service assistance on an interim basis, and longer term support is being planned.

One of the anticipated but as yet unrealized potentials of the ISSOE system is to assist overall instructional management by all those involved in the delivery of occupational education programs. As major components of the total ISSOE system are tested and verified attention will shift to other elements of the total management system. Those involved with ISSOE can see a broad range of opportunities which ISSOE suggests for improvement of additional dimensions of occupational education in New York. In time, these opportunities will be grasped and the great potential realized.

ISSOE Dissemination Planning—Phase I

by Steven Farrar and Vernon Beuke

In an earlier issue of *Career Commentary*, we reported on a project designed to address the diffusion of the ISSOE system. The objectives were to: 1) review the literature, 2) sponsor a scholar colloquium, 3) identify critical elements affecting ISSOE's institutionalization, and, 4) develop alternative plans for the institutionalization of ISSOE. This article presents the major findings of the first phase of the Dissemination Project.

Our review of the literature indicated the critical role innovation plays in occupational education. The rapidly changing knowledge base of occupational education must accurately reflect the real world of specific job-related skills, abilities, knowledge and attitudes. Hence, the occupational teacher must not only know the new technologies and skills, but also be able to assist the learner to acquire and demonstrate these at an acceptable level of proficiency.

If occupational education is to remain a viable source of training and education for the market place, it must continually access the resources of the basic and social sciences. Not only must these resources be accessed, they must be interpreted for classroom use. It is paramount that mechanisms exist whereby new knowledge and skills can quickly blend with or supercede the old.

The Cornell Institute for Occupational Education (CIOE) and the New York State Education Department jointly invited leading scholars in innovation research to address the issues in educational innovation. Contributors to the series were drawn from many fields including political science, economics, social psychology, psychometrics, educational psychology, and sociology. The resulting papers have been published by the Institute and is entitled *Implementing Change in Occupational Education: A Compendium of Resource Papers*. This compendium is organized around three themes: a historical recap of innovation research; conceptual issues in innovation research; and, problems of implementing innovation.

As a result of this research, critical factors impacting on ISSOE implementation were identified. Among the important elements are:

- characteristics of the innovation,
- contextual factors, and
- strategies for implementation.

Characteristics of the innovation which have been consistently related to implementation are financial cost, administrative support, compatibility with existing programs, and the relative advantage over currently used methods. These kinds of characteristics have to do with the utility and adoptability of the innovation.

A second set of elements were those related to the school context. A school district's financial and human resource pool is directly related to successful implementation. *Total* resources, however, are less important than wise use of limited resources for staff training, program planning and information dissemination to participants.

Implementation strategies vary widely in purpose and complexity. Getting the "good news" out is only one part of a successful strategy. Successful implementation strategies have two things in common:

- they offer a variety of incentives to encourage use of the innovation, and
- they provide training which will enable users to become proficient in the new method or program.

Perhaps the bottom line on a half-century of innovation research is the requirement that products of educational research and development meet the complex needs of society. This can be done but it is not an easy objective to attain. It means that client groups be clearly delineated and that good data be collected on their problems, desires, and local situations. Field testing and product evaluation are crucial to product development. It further means that research and development efforts cannot proceed in a vacuum. After all, the final jury on educational innovation is the practicing educator.

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The New York State College of Agriculture and Life Sciences, a Statutory College of the State University of Cornell University, Ithaca, NY 14853. A Report of Research of the Cornell Agricultural Experiment Station.

Duke Zuzio cont.

course of study they were in. So conditioned to fear of failing, they found this concept of "no failure" very difficult to believe, but once the realization set in, students seemed happier, more motivated, and eager to perform. However, the program was not without its "casualties". Some had great difficulty when confronted with basic cognitive learning skills. This is a serious problem that needs to be thoroughly examined and resolved at the *local levels*. Possible solutions may be the development and implementation of programs that will address the deficiencies that some students appear to have in reading, writing, and the comprehension levels of the cognitive domain.

One of the most serious fallacies which educators seem to perpetuate is that we must teach the entire curriculum from beginning to end or from A to Z. The ISSOE concept of performance-based skills—training for employment in the world of work allows for this A to Z curriculum teaching, but does not insist upon it. Several factors I discovered while implementing this phase of ISSOE were: some students come to us with knowledge that enables them to complete a minimum course of study in six months; some students may be on a co-op with local industry and need only specialized instruction instead of the entire curriculum; and for most I had to ask, "Is it absolutely necessary to teach the entire curriculum?", "Is it realistic to think that we can?" The ISSOE concepts of instructional flexibility, "menu" type curriculum selections, student personalized program adaptable to the IEP's of the handicapped, and criterion-referenced, performance-based evaluation, without failure allows a teacher to be both realistic and hopeful of solving more learning concerns for more students.